US Army Technical Center for Explosives Safety (USATCES), McAlester, OK 74501

Explosives Safety Bulletin

October 2011 https://www3.dac.army.mil/es/usatces/

Incident Involving M84 Stun Grenade

Previous Bulletin Index

BY: Chemical/MEC Safety Div
DSN: 956-8155

M84 Stun Grenade functions at ATHP Liberty injuring an inspector. (See grenade description below.) An M84 Stun Grenade was received as amnesty during the day shift. Primary and Secondary safety pins were missing along with the safety lever "spoon". The red plug cap and aluminum charge holder tube were visible. The grenade was placed on "QASAS only" inspection table for items requiring special attention (QASAS – Quality Assurance Specialist Ammunition Surveillance). The night crew inspector took over and was demonstrating, to assisting soldiers, fuze components that were not visible when covered by the lever/spoon. The spring loaded striker was cocked and released multiple times; then the grenade functioned. The inspector received lacerations/ burns to the hand requiring 20+ stitches and his right eardrum was punctured from the sound pressure levels.

Possible reasons for dud condition of grenade: (1) The spring loaded striker in the fuze may have been cushioned or bound up by sand/mud/foreign material and did not strike percussion primer with sufficient force to function. Multiple cocking of the striker cleared away the foreign material and resulted in primer initiation. (2) The primer composition may not have been located precisely between primer case and anvil. A first strike may have dislodged the composition or deformed the primer cup sufficiently so that a second or third strike functioned the primer.

Contributing Factors: (1) Lighting for night shift operations was marginal. The red cap plug and aluminum tube may not have been readily visible especially in an amnesty return in less than pristine condition. (2) The inspector may not have familiarized himself with the fuze/grenade components that would be visible in a live/dud round. You don't see these stun grenade rounds every day, especially without safeties and levers/spoons. (3) Training with live munitions was being conducted because soldiers assisting the QASAS were not Military Occupational Specialty (MOS) 89B, ammunition specialists. (4) The day shift did not fully communicate the nature/condition of the round in question.

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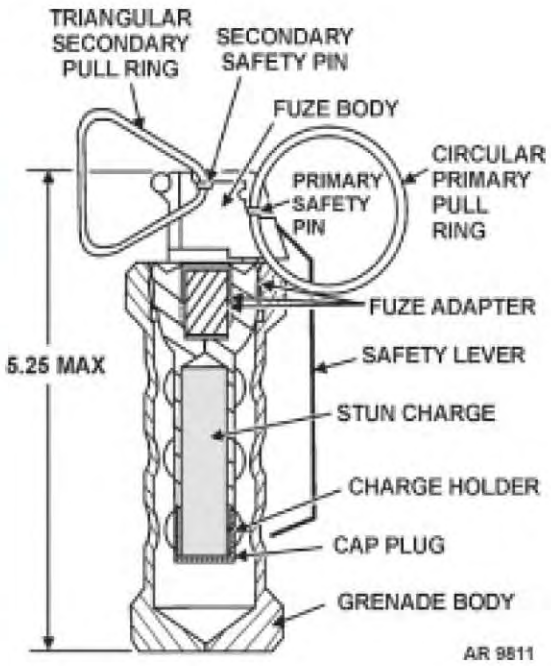
Lessons learned: Grenades (lethal, non-lethal, chemical, and pyrotechnic) with missing safety pins/levers should be treated as live until you can confirm functioning. Intact bodies and components, still sealed vent holes, and body coloration still original are indications of a live round. Contact Explosive Ordnance Disposal (EOD) personnel for disposition. In this case, as well as the M102 practice round, the red cap and aluminum charge container being intact would indicate the item was still live.

Training. Field conditions often dictate that the soldiers/civilians assisting in ammunition operations may not be familiar with the items, safety devices, safe handling techniques, inspection points, and packaging. Training with live ammunition items are a fact of deployments. Safety briefs are essential. Inspectors should take special care to familiarize themselves with any ammunition item that is not routinely processed. Do not unpackage any items beyond what is required for an inspection or other operation. Do not function any part of an ammunition item as part of training or inspection unless called for in specific guidance.

M84 Grenade (1330-GG09): The M84 features a magnesium-based pyrotechnic charge inside a thin aluminum case, contained within a perforated cast steel body. The pyrotechnic (stun) charge produces a subsonic deflagration, not a supersonic detonation, minimizing the blast effects. On initiation, the inner aluminum case is designed to be consumed by the pyrotechnic compound, with only the auditory and visual elements of the deflagration being permitted to escape via the perforations in the cast outer body. This design minimizes the risk of collateral damage due to flame, blast and unconsumed fragments of the inner case. The stun grenade produces an intense flash exceeding 1 million candelas with accompanying noise level between 170 to 180 dB. The M102 Practice Stun Grenade is similar with a replaceable flash/bang fuze cartridge and a blue external body. References: TM 43-0001-29, Army Ammunition Data Sheets for Grenades and SB 742-1, appendix AG.

Live M84 **Expended M84** **Incident M84**



Cutaway of M84

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Military Munitions Response Program (MMRP)

BY: Chemical/MEC Safety Div
DSN: 956-8155

If you work for an Army installation that has closed ranges or closed training and maneuver areas, Military Munitions Response Program (MMRP) may be about to reach out and touch you, if it hasn't already. If you've never heard of the MMRP, here's a rundown.

The MMRP is a program set up by Congress to investigate, and if necessary, clean up Munitions and Explosives of Concern (MEC) at Munition Responses Sites (MRS). MMRP only provides non-emergency responses to MEC; Explosive Ordnance Disposal (EOD) provides emergency responses.

MEC consist of unexploded ordnance (UXO), discarded military munitions (DMM), and munitions constituents (MC) in high enough amounts or concentrations to pose an explosive hazard.

A MRS is an area that contains MEC; examples are a closed range or a closed training and maneuver area. While closed training and maneuver areas aren't as hazardous as most closed ranges they do contain things like discarded trip flares, smoke grenades, practice mines and small arms ammunition. Most closed ranges/areas have been closed a long time, some have even become housing, admin or shop areas.

Up to now, the MMRP has been focusing mainly on installations that closed a long time ago at Formerly Used Defense Sites (FUDS) or on installations that are closing due to Base Realignment and Closure (BRAC). In the past FUDS and BRAC installations were the priority, but now the MMRP is turning its attention to active installations.

So what does the MMRP aim to do? First, find out if MEC exist on-site and second, decide what to do about it.

To find out if MEC is there, the Army Environmental Command (AEC) will investigate these closed ranges by records searches and site inspections. Next, they'll hire UXO contractors to run detection instruments over a sample of the acreage and dig up the detected anomalies to get a picture of what's likely there. If MEC is there, the sampling will help form a picture of the situation – the type of munitions, how many, how deep, and so on. Based on this picture, the AEC may decide to do a full-blown cleanup.

During both the intrusive investigation (and the full-blown cleanup, if there is one), the UXO contractor will need to work with the installation or the mission commanders to establish exclusion zones around the work area. They'll need one exclusion zone when digging up anomalies, and another one for blowing any live items found. The size of these exclusion zones can vary from only a few hundred feet to thousands of feet, depending in part upon the types of munitions there.

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So how will the installation or the mission commanders support AEC and its UXO contractor?

Submission of an explosives site plan. The UXO contractor normally writes these but the installation or Mission Commander submits them.

Environmental sampling. The Environmental Office will get on board if AEC and its UXO contractor plan on doing soil/groundwater sampling to look for munitions constituents (lead, explosive compounds, etc.)

Storage of MEC and/or demolition materials. The UXO contractor may need to use an installations magazine(s) for a few months to store these.

Demolition of found MEC. The UXO contractor may ask to use the installations demo ground or EOD range to blow MEC. Sometimes the installation blows the MEC for the contractor, if the installation wants the work.

Exclusion zones. Security will help maintain the exclusion zones and evacuate buildings. These investigations are explosives operations so they throw Quantity Distance (QD) arcs, see the DA Pam 385-64, chapter 22, for explanations/requirements of QD arcs. Some munitions found can be moved to the demo range and blown but other munitions will be unacceptable-to-move and will have to be blown-in-place (BIP).

In summary, if AEC tells you they're coming, be prepared to make accommodations! You'll end up with improved property in the long run, so it's worth the effort.

Explosive Safety Bulletin "Misfires and Duds"

BY: Chemical/MEC Safety Div
DSN: 956-8155

The July 2011 edition of the Explosive Safety Bulletin (ESB), in the article "Are You a New Commander?" stated that the Joint Hazard Classification System (JHCS) is a source for the Controlled Inventory Item Code (CIIC). This is inaccurate as the JHCS does not list the CIIC as one of its data points. AR 708-26, Appendix F-3 assigns CIICs to broad categories of ammunition. DA PAM 708-2, "Cataloging and Supply Management Data Procedures for the Army Central Logistics Data Bank", Table 3-9 lists CIIC codes. The Federal Logistics Information System Web Search (WebFLIS), at http://www.logisticsinformationservice.dla.mil/webflis/default.asp gives specific item CIICs. Additionally, The Logistics Modernization Program (LMP) and The Defense Ammunition Center (DAC) "Yellowbook"(unofficial) are two additional sources for CIIC identification of A&E.

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USFOR-A Safety Alert

SAFETY ALERT

SAFETY ALERT

SAFETY ALERT 12-003

DEPARTMENT OF DEFENSE
HEADQUARTERS, US FORCES-AFGHANISTAN
NEW KABUL COMPOUND, KABUL, AFGHANISTAN
APO AE 09356

FOG GRENADE RECALL ALERT!!

USFOR-A-SAFETY ** FRAGO PENDING** 15 Oct 2011

ENSURE WIDEST DISSEMINATION AND POST ON BULLETIN BOARDS

- FAST OBSCURING GRENADES (*FOG*) MUST BE TURN-IN IMMEDIATELY TO THE AMMO SUPPLY ACTIVITY/AMMUNITION SUPPLY POINT
- BACKGROUND: FOG GRENADE CAN BURST IN AS LITTLE AS *0.3 SECONDS*
- RECENT INCIDENT AS WELL AS PAST ACCIDENTS HAS CAUSE INJURY TO SOLDIERS HANDS AND FINGERS DUE TO BLAST AND FRAGMENTATION

★★ *IMMEDIATE ACTION REQUIRED!!!* ★★

FOG

UNCLASSIFIED

- A FAST OBSCURING GRENADE IS NOT YOUR TYPICAL SMOKE GRENADE!
- A FOG GRENADE IS INDENTIFIED BY ITS FIBERBOARD BODY, FLAT TOP WITH FOUR SCREW HEADS VISIBLE AND THE NOMENCLATURE (FAST OBSCURANT GRENADE)

"SAFETY IS INTEGRAL TO THE WARRIOR"

USFOR-A Safety Kabul	USFOR-A Ground Safety	USFOR-A Safety (S/SW) Kandahar
DSN 318-449-4830	DSN 308-436-7358	DSN 318-421-7434

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Explosive Safety Assistance Program

By: Risk Management Div
DSN: 956-8784

As a commander or senior safety official, do you wonder how your installation explosives safety program stacks up against the rest of the Army? Do you look for ways to improve your explosives safety posture at your installation? Do you ever think, "How good are we doing versus the rest of the installations out there?" In these lean times of mission proliferation and resource limitations are there areas of your explosives safety program being overlooked?

The Technical Center for Explosives Safety (USATCES) can help you answer all those questions and more. The Explosives Safety Assistance Visit (ESAV) Program is a 'free' look at your overall explosives safety program. Commanders and safety professionals can use this visit as a tool to judge how healthy their explosives safety posture is.

The ESAV Program provides a 'white hat' evaluation of the entire explosives safety program and lets the commander and safety staff know where both their strong points and weak points in the program are. Thirty seven elements and sub-elements are evaluated and rated to give the commander an 'in-depth look' into the inner workings of the installation explosives safety program. Since there is no requirement for a written response with any type corrective action report, it is truly a 'white hat' assessment of the program. The report generated during the ESAV is only shared with the installation and not forwarded to anyone. So in reality this is an easy way for the commander and safety professionals at the installation to see where their program is.

But, there is more……the best part of this visit for the installation is that it is FREE!!! Yes, free! The ESAV Program is a free look at your program! What more could you ask for!?!

If you are interested in an ESAV visit, notify your higher headquarters that your installation is interested and, with their approval, let USATCES know you need a visit from one of our ESAV teams. Normally, ESAV's are conducted during the January to September months. This is typically due to limited funding at the start of the fiscal year. However, don't wait until then to let us know you need a visit. The initial email goes out in September asking for installations requiring assistance so let your higher headquarters know you are interested and get on the list for a visit.

To ask questions about the program, call us at DSN 956-8737 or 956-8789 or send an email to mcal.dac.es.hotline@conus.army.mil

To unsubscribe, subscribe, ask a question about or provide a comment for an article in this Bulletin, click here.

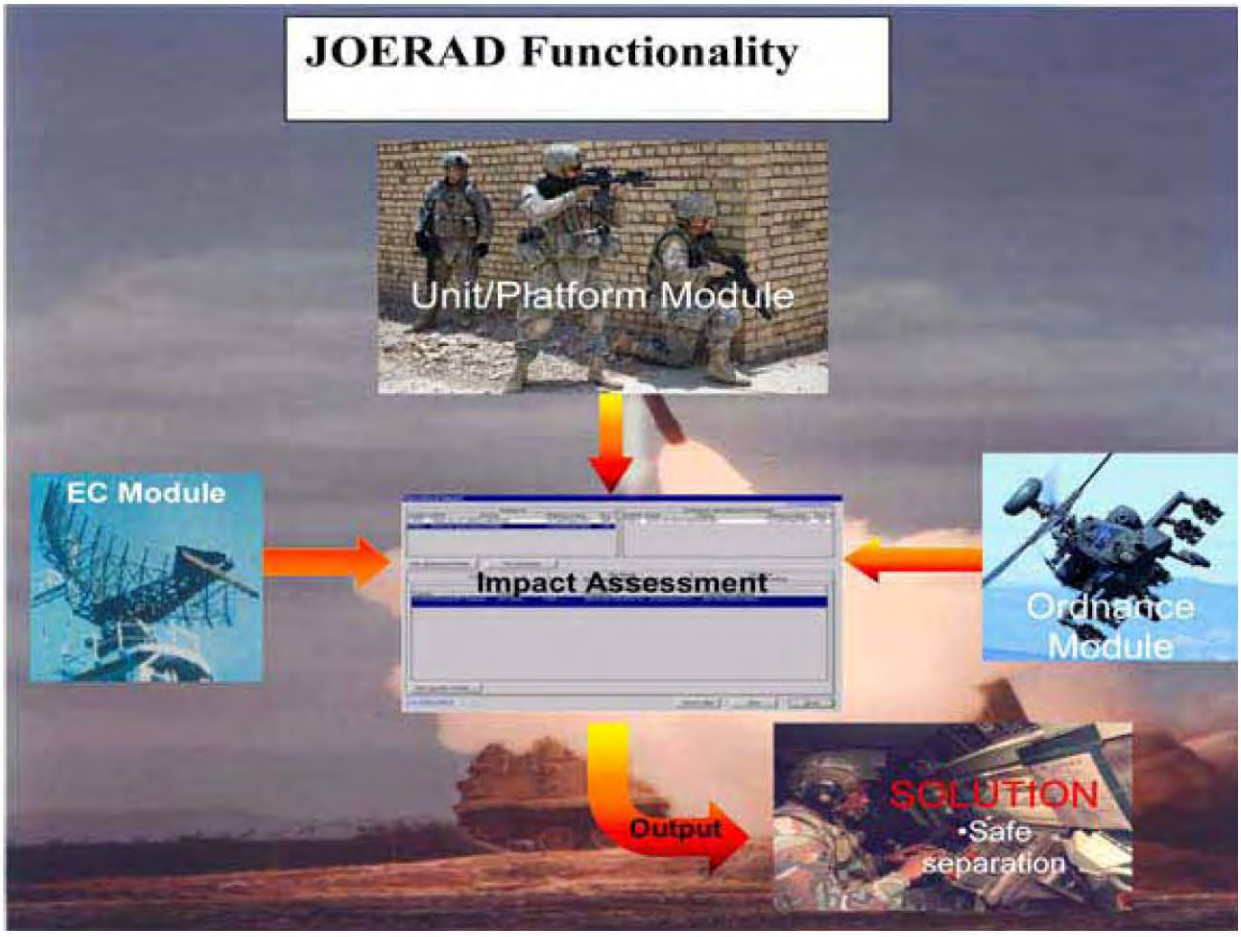
For any other explosive safety questions/comments, click here.

For past bulletins, go to the Explosives Safety Bulletin Index

HERO INFO

Joint Spectrum Center Ordnance Electromagnetic Environmental Effects Risk Assessment Database (JOERAD) Version 9.5 has completed validation and verification process and is now available! JOERAD is an automated Hazards of Electromagnetic Radiation to Ordnance risk assessment tool developed by the Joint Spectrum Center (JSC) to analyze the potential RF interactions between ordnance and emitters in joint exercises in a unit or on a platform.

JOERAD accesses databases for emitter and ordnance technical specifications, calculates safe separation distances and/or safe emitter power levels and displays the results for the warfighter in a comprehensive format that can be used for operational planning. Version 9.5 permits better interaction within the different modules leading to a faster and more comprehensive end analysis of selected emitter-ordnance combinations. The software is available by submitting a DSO Access Request Form (DARF) available at: aac.dau.mil/joerad. Be advised that the software itself is classified SECRET and a mailing address for classified information must be provided.



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Operation Clean Sweep

Reprinted by permission of 101st Sustainment Brigade, 101st Airborne Division (AA) Public Affairs
Story by Spc. Michael Vanpool

Date: 08.25.2011
Posted: 08.25.2011 11:08
News ID: 75915

BAGRAM AIR FIELD, Afghanistan – "There's a lot of ammo out there from the past 10 years," said Capt. Marjorie Samples. "It's handed from unit to unit, year to year."

The 101st Sustainment Brigade "Task Force Lifeliner" is leading a process, called "Operation Clean Sweep," to sweep through Regional Command East by inventorying ordnance, sending the old ammunition off smaller outposts, and preparing better storage for the future.

"It's an effort to address ammunition and explosive issues in the battlespace after ten years of war," said Samples, the ammunition (Class V) officer in charge for support operations, 101st Sustainment Brigade. "Some of the issues are excess ammo, unserviceable ammo and improper storage of ammo."

The Class V section worked with Combined Joint Task Force – 1st Cavalry, U.S. Forces - Afghanistan and Joint Munitions Command to stand up five teams to sweep throughout the battlefield.

"We're practically sweeping and cleaning the battlespace," Samples said, "and getting the ammo retrograded for us to prepare to leave theater."

The teams worked with the task forces in charge of each battlespace, and they are composed of explosive safety representatives, quality assurance specialists (ammunition specialist) and engineer representatives.

Ammunition handlers, pulled from the 142nd Combat Sustainment Support Battalion, 101st Sust. Bde., were also trained up to help with the sweep. The handlers are a mixture of truck drivers, mechanics and fuelers, so the ammunition specialists of the 592nd Ordnance Company, a reserve unit from Billings, Mont., attached to the 142nd CSSB, gave a crash course to prepare for the mission.

The 592nd trained the handlers before they set off for the austere outposts. The 592nd operates the Bagram Ammunition Supply Point, the single location that resupplies ammo for Regional Command North, East and Capitol.

"The largest part of the mission was inspection and packaging the ammunition," said Staff Sgt. Ryan Lugenbill, the ASP operations non-commissioned officer in charge for the 592nd. "After that, they'd have a basic knowledge to handle the ammo."

The 15 handlers learned how to inventory, palletize and retrograde ammo. "They could use that knowledge to send the good ammo back to Bagram back in to the ASP, and the bad ammo would be retrograded," Lugenbill said.

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After a month of learning, working and sweating at the ASP here, each of the handlers joined the rest of their team and moved out.

"The teams left here and went into each battlespace, exploring hazards and conducting 100 percent inventories at each site," Samples said. "We're focusing on the smaller company-sized [combat outposts]."

When the teams land at a COP, they find all the ammo on the small bases. The ammo is sifted through, the holding areas are inspected, and the teams retrograde some of the ammo back to Bagram.

Storing ammo is a complicated task. The engineers on each team work with the COPs to re-fit their ordnance holding areas, to protect the future ammo from the elements and separating the rockets and the bullets. "The engineer tells the COPs how to store their ammo, where to store it, and mitigate any hazards," Lugenbill said.

"Once all of this is complete, they go to a different COP in the battlespace," Samples said.

As they leave, the task forces and commanders say they are appreciative of the work the teams are doing for their outposts and soldiers.

"We're hearing back from the battlespace owners how knowledgeable these guys are and how easy the process is going," Lugenbill said.

Each team is scheduled to visit 25 to 30 outposts during the next few months. The teams stood up and headed out this month, and they are prepared to continue on with operation until December.

USATCES Clean Sweep Team

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Arms Room - New DA Guidance

BY: Chemical/MEC Safety Div
DSN: 956-8155

Storage of hazard divisions (HD) 1.2.2, 1.3, and 1.4 ammunition and explosives (AE) in arms rooms is permitted when storage in an approved AE storage facility would adversely impact operations or result in excessive costs (e.g., unit personnel providing 24-hour security or extended travel).

The various requirements of arms room AE storage are listed in paragraph 8-3 of DA Pam 385-64 and will not be repeated here. However, the Department of the Army updated those policies in memorandum "Storage of Ammunition and Explosives in Arms Rooms" dated 1 August 2011.

The revised policy guidance does several things:

1) **TFOBs and TTSs.** Establishes requirements for the storage of AE in arms rooms at Training Forward Operating Bases (TFOBs) and Tactical Training Sites (TTSs) on Army installations. TFOBs and TTSs are defined as any area on an Army installation that replicates an overseas operating base in a theater of operations (e.g., Forward Operating Base {FOB}, Combat Outpost {COP}). Ammunition storage in arms rooms at these facilities do not require an approved explosives safety site plan but must have an explosives storage license.

2) **Training ammunition.** Training ammunition now has specific limits on how long it can be stored (30 days, 90 days, or expiration date of DA Form 581), depending on how close the unit is to an approved AE storage facility (duration formerly left up to the garrison commander).

3) **Ceremonial ammunition.** DA Pam 385-64 authorizes up to 100 lbs. HD 1.3 and 1.4 AE in storage rooms (including non-ceremonial ammunition) provided "no other practical alternative exists." Authorized quantities under the new policy guidelines remain the same only if the nearest approved AE storage area is over 30 minutes away. For arms rooms that are 30 minutes or less from an approved AE storage area, the amount of ceremonial AE that is HD 1.3 and/or 1.4 stored will not exceed one full outer pack.

You can download a copy of the DA arms room memo from the AKO USATCES Explosives Safety Ammunition Tool Box (under "Ammo and Explosives Safety Policies") by pasting the following into your web browser: https://www.us.army.mil/suite/doc/33275939. Make sure your subordinate commands don't have more restrictive requirements.

The latest version of AR 385-10, The Army Safety Program, is available at the following link:

https://www.us.army.mil/suite/doc/33290552

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(Un)Common Explosives

BY: Chemical/MEC Safety Div
DSN: 956-8155

Do you have an old pre-1945 first aid kit? Depending what it contains your interesting historical artifact could be a “ticking time bomb”.

In the early 20th Century through the end of World War II it was common practice for first aid kits to be equipped with picric acid soaked gauze bandages used for the treatment of burns. Early 20th Century pharmacies also stocked picric acid as an antiseptic and a treatment for malaria, herpes and smallpox. From the late 19th through World War I picric acid was used by most military powers as an explosive fill for their artillery shells. It was replaced by the more stable TNT and RDX.

In liquid form, picric acid is stable however as it dries it forms yellow crystals. Crystallized picric acid is explosive and very sensitive to shock and friction. Furthermore, if picric acid comes in contact with metal it will form metal picrates that are even more sensitive.

Older first aid kits may also contain ether which was used as anesthetic to numb patients and ease their pain. If exposed to air, ether can form organic peroxide crystals which are extremely sensitive to shock and can explode if handled improperly.

Picric acid can be found in vials or bandages in military, commercial, Boy/Girl Scout and other first aid kits. Ether is typically found in vials. If you believe you may have these items in an old kit have Explosive Ordnance Disposal (EOD) or the Fire Department’s Haz Mat team check it out. Better to be safe than sorry.

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Last One Out Turns Off the Lights in Iraq

By: Risk Management Div
DSN: 956-8784

It's time to shut off the lights and close the doors! Throw everything in a box, send it down the road and check it off your 'to-do' list, right? Well, no, not when shipping ammunition and explosives (AE). The couple of days or handful of hours saved not packing AE properly will be lost during the UCMJ investigation if someone gets hurt, dies or if Army material gets destroyed or damaged because of improper packaging. This is particularly true when the AE in question is going to be airlifted. It is a violation of Article 92, UCMJ to fail to follow the mandatory provisions in the AFMAN24-204(I). A C-130's load master recently refused a container because of discrepancies found in the certification documents. The incident is under investigation and LTG Helmick signed a Yellow Safety Alert on August, 24, 2011, subject: Certification of Hazardous Cargo to emphasize the seriousness of the situation, (copy on next page).

In the best of times, properly shipping AE can be challenging. Luckily there are personnel resources available in-country to assist in proper loading/ shipping procedures and required paperwork in the person of the local Quality Assurance Specialist, Ammunition Surveillance (QASAS) and/or Ammunition Logistic Assistance Representative (LAR). These individuals work for, and were trained by, the Army to be the AE subject matter experts and, as such, they are happy to provide help and guidance in prepping shipments. If a specific location doesn't have a QASAS/LAR assigned and it is unknown who should provide assistance, contact the Explosive Safety Office at NIPR: 847-3021, and they will provide assistance.

Some things to note, blocking and bracing requirements for intra-theater ISO containers can be found in drawing #19-48-4117-11PA1003, unless otherwise specified. The drawing gives the "Do's and Don'ts" for shipping AE in ISO containers via highway in-theater, however, if the specific ISO container/AE is destined for shipment by vessel, rail or out of theater then the AMC drawing 19-48-4153 will be used instead. If the drawing(s) are unavailable at a specific location or if further guidance is desired, contact the local QASAS/LAR, they are more than happy to help.

SAFETY ALERT

HEADQUARTERS
UNITED STATES FORCES - IRAQ
AL ASAD, IRAQ
APO AE 09333-1400

USFI-DCG-O

AUG 24 2011

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Certification of Hazardous Cargo

- BLUF: Transporting hazardous material without proper documentation is prohibited. Hazardous material must be properly classified, described, packaged, marked and labeled, and in proper condition for military airlift. During a recent equipment load-out, a C-130's load master refused a container because of discrepancies found in the certification documents. This incident is under investigation.

- Commanders must ensure their Unit Movement Officer(s) obey mandatory provisions in AFMAN24-204(I). Failure to obey provisions of mandatory subparagraph(s) is a violation of Article 92, UCMJ.
- Packaged hazardous materials must be properly marked and labeled to identify the contents.
- Preparers (trained and certified) must certify hazardous materials. For more information go to: https://staff.forces.iraq.centcom.mil/sites/spt/safety/Lists/Announcements/DispForm.aspx?ID=74.

These photographs are an example of improper packaging for air shipment. This is unacceptable.

- In 1996 ValuJet Flight 592 crashed in the Everglades near Miami, Florida. 110 souls were lost. The NTSB determined the fire created in the cargo compartment was initiated by hazardous cargo being improperly carried as cargo of ValuJet flight 592.

Example of the negative affects hazardous cargo presents:

ENSURE WIDEST DISSEMINATION AND POST ON BULLETIN BOARDS

FRANK G. HELMICK
Lieutenant General, USA
Deputy Commanding General
For Operations

DISTRIBUTION: A

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ALARACT: Nonstandard Ammunition and Explosives

By: Risk Management Div
DSN: 956-8784

A new All Army Activities (ALARACT) message has recently been released by HQDA. The subject of the message is Nonstandard Ammunition and Explosives. This ALARACT provides a synopsis of the Army's policy on nonstandard ammunition and explosives to include validating requirements for the ammunition, minimum safety criteria, procurement, handling, storage and transportation. The message lists twelve references that are very important and should be thoroughly researched before procuring nonstandard ammunition and explosives.

DOD and Army ammunition is developed and tested with safety in mind. The packaging and storage configuration contributes to how it is assigned a hazard class and division. We know what we are dealing with when we receive Army ammunition. When we go outside the system and procure nonstandard ammunition and explosives we cannot be certain of the built in safety features or the hazard class and division. Our personnel may be at risk when we incorporate nonstandard items into our operations.

In order to store nonstandard ammunition and explosives on an Army installation a hazard class, division and storage compatibility group must be assigned. In some cases nonstandard ammunition may have a Final Hazard Class (FHC) and division assigned and many be listed in the Joint Hazard Classification System (JHCS) database because another unit has identified a need and received authority to purchase and store the same nonstandard ammunition. Other nonstandard ammunition may have an Interim Hazard Clearance (IHC) assigned. In all cases, a hazard class and division must be assigned by the US Army Technical Center for Explosives Safety (USATCES).

It is a violation of federal law to procure ammunition and explosives outside of the normal procurement channels unless it is approved. Violators can be prosecuted under the Uniform Code of Military Justice (UCMJ) or applicable federal or state laws.

Many ceremonial units have missions that require the use of nonstandard ammunition that cannot be procured through the normal requisitioning system. There are procedures to identify and justify the need, and request authority to purchase the ammunition locally or from a commercial vendor. Remember that whenever we use this route we must insure that we have identified, mitigated, and accepted any risk to our organization and any other military, civilians or the general public before we go outside of channels and purchase nonstandard ammunition and explosives.

You can read the full message here: https://www.us.army.mil/suite/doc/32058358

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Soldiers Still Having Problems with M2 Machine Gun

BY: Chemical/MEC Safety Div
DSN: 956-8155

During August and September there were eleven reported mishaps involving the M2 Gun, which were caused by improper headspace and timing. The following are a few examples of the mishaps that occurred, resulting in damage to the weapon and, in some cases, injury to personnel:

A .50 Cal round exploded during a live fire exercise. The NCO performed all headspace and timing steps except step 7. The failure to perform all steps created too large of a gap between the barrel extension and the trunnion block and caused the round to function before it was properly seated. Sharp metal exited the bottom of the weapon, injuring the service member.

After firing approximately 75 rounds of .50 Cal, the soldier experienced a failure to chamber malfunction, cracking the receiver and damaging the bolt, the breechblock slot and the breechblock. The cause was incorrect timing.

Prior to a mission in theater, two soldiers attempted to perform headspace and timing. The barrel extension would not install smoothly, so the barrel was replaced and headspace and timing was performed. Once the convoy proceeded out the gate all vehicles stopped to test fire the weapon to ensure functionality. The gunner attempted to load the weapon but the round would not chamber. When the feed tray cover was opened, they realized the round was still there. The round could not be removed; the gunner released the charging handle and pressed the trigger. The cartridge ruptured blowing the feed tray off the weapon. The weapon was replaced and the mission continued. The likely cause is headspace and timing.

DON'T ADD YOURSELF TO THIS LIST! USE THE FOLLOWING LINKS AND BE SAFE!

M2 HEADSPACE AND TIMING "HOW TO" POSTER:

https://www.us.army.mil/suite/doc/8119715

M2 HEADSPACE AND TIMING POCKET GUIDE:

https://www.us.army.mil/suite/doc/7645842

M2 HEADSPACE AND TIMING "HOW TO" VIDEO:

https://www.us.army.mil/suite/doc/19825397

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Frequently Asked Questions

BY: Chemical/MEC Safety Div
DSN: 956-8155

1. **How can I obtain access to the current Joint Hazard Classification System (JHCS)?**

The JHCS is the official reference for hazard classification and it's located at www3.dac.army.mil/. A Common Access Card (CAC) and registration are required. Once at the site go to the Available Products tab and you will find the JHCS link. Follow the instructions to register; once access is gained you can query /view the most current version of the JHCS.

2. **Is a bond required from a fence to a lightning protection system (LPS)?**

Fences which come within 6 feet of an explosive structure will be bonded to the structure LPS or its grounding system. See DA Pam 385-64, Paragraph 17-22e for further information.

3. **Is there a requirement to bury fiber optic cable prior to entering an explosive structure?**

The following is previous guidance from DDESB; a determination needs to be made whether the fiber optic cable contains any conductive wires. If there are no conductive wires which enter the building, the cable will not have to be buried. If the fiber optic cable contains conductive wires, then it must be in conduit and buried the last 50 feet prior to entering the building, and surge protection must be provided.

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